inference in his last letter (NATURE, vol. xxi. p. 226). Here you have it:—

> "The Mind, that broods o'er guilty woes,
> Is like the scorpion girt by fire;
> In circle narrowing as it glows,
> The flames around their captive close,
> Till inly search'd by thousand throes,
> And maddening in her ire,
> One sad and sole relief she knows:
> The sting she nourish'd for her foes,
> Whose venom never yet was vain,
> Gives but one pang, and cures all pain,
> And darts into her desperate brain."

I hope to tax your patience no further on scorpion *felo de se.*

Prov. de Jaen, Linares, Spain, January 17 F. GILLMAN

Meteor

A MAGNIFICENT meteor was seen here last Monday evening (19th inst.) at 6.8 P.M. The meteor when first observed had an elevation of about 30° above the horizon and was travelling due west. It appeared to me to be at least four times the size of Jupiter and much more brilliant, the colour being bright blue. It seemed to be moving comparatively slowly and was in sight for some two or three seconds. When still about 15° above the horizon it burst, sending forth a number of different coloured sparks, in fact strikingly reminding one of the bursting of a sky-rocket. No report could be heard after the explosion. I may add that the night was very fine and the moon bright, and that a number of small meteors were seen at the same time.

West Calder, N.B., January 21 J. S. THOMSON

ON HALLEY'S MOUNT

"Hoc primum ab homine Anglo invertum fuisse non inficiabitur æqua posteritas."

IN Mrs. Gill's account of her voyage to Ascension,[1] she relates how her husband (since appointed astronomer at Cape Town) visited Halley's Mount, a prominent spur on the northern declivity from Diana's Peak, the central culminating point of the Island of St. Helena. Here, on a small plateau, the sight of a few roughly-squared blocks of tufa cannot fail to inspire the beholder with deep interest, for these stones, now overgrown with wild-pepper and blackberry brambles, are all that remain to mark the site of a celebrated astronomical station.

The neglected state of these ruinous foundations,

> "In which there was obscurity and fame,
> The glory and the nothing of a name,"

contrasts in a marked manner with the "exquisite neatness" (as Mrs. Gill terms it) which distinguishes the cœnotaph of Napoleon[2] in the so-called "Vale of the Tomb" several hundred feet beneath.

Here it was that Edmund Halley 200 years ago established his observatory, and first constructed his "Catalogus Stellarum Australium;" here he observed the transit of Mercury, and wrote his method of obtaining the sun's parallax by the forthcoming transits of Venus, and here made the first[3] magnetical observations in the southern hemisphere.

On the eve of Mr. Gill's astronomical experiment at Ascension, then a matter of uncertain expectancy, now happily a successful *fait accompli*, no wonder is it that a sincere sympathy with the aspirations of his predecessor determined him to some day find the means and opportunity to raise a memorial on the spot.

To astronomical students the apotheosis of the great Halley is immortally celebrated by the comet which bears his name; but to the "*profanum vulgus*" the mention of Dr. Halley conveys no conception of his genius nor of the practical scientific benefits he bequeathed to the English nation. It was Delambre who, speaking of Halley's "Synopsis Astronomicæ Cometæ," said (*Ast. Siècle*, xviii. p. 310): "Voilà bien, depuis Kepler, ce qui on a fait de plus grand, de plus beau, de plus neuf en astronomie."

It is a fact hardly yet appreciated either in England or America, that Dr. Edmund Halley is second only to Isaac Newton, whose friend and contemporary he was (Newton's "Principia" was first printed in 1686-7 at Halley's expense), and that it is to this close contemporaneity alone that the bright light of Halley's star has suffered diminution of lustre from the brilliant rays of his world-renowned neighbouring luminary.

No biographer has yet appeared to write the life of this great man, nor does any public monument yet adequately represent the national estimation which is so richly deserved by the second most illustrious of Anglo-Saxon philosophers. The first of these two reproaches is, we believe, on the eve of being wiped away; for we learn that Prof. Pritchard[1] of the Oxford University, to whom (as holding the Chair of Astronomy denied to Halley by Stillingfleet) pertains the honour of compiling so valuable a biography, is preparing for the press a full account of the long life-work of the venerable astronomer.

It is to remove the second of these wants that we now would advocate, through the columns of NATURE, the erection of a fitting memorial to our illustrious countryman on the spot which is indissolubly connected with his name, as the scene of his famous achievement.

The onerous duties of the astronomer at Capetown have prevented his doing more than suggesting the idea of a monument to Halley and the most appropriate site; it now remains for us with more leisure at home to forward the idea, and do our utmost to carry out his well-intentioned scheme; nor need we fear that it will be lost sight of and fall to the ground, now that it has been brought forward to the notice of our scientific societies. This recognition of the claim of Halley to his proper place on the roll of English scientific worthies, although somewhat tardy, need not therefore be the less hearty and thorough now that it takes place. It is now some seven or eight years since the Tuscans expended nearly forty thousand pounds in a memorial to their "Divinus Galilæus," at Florence;[2] and in 1874 the preparations for observing the transit of Venus recalled to our minds the hitherto obscure memory of the long-forgotten Jeremiah Horrocks. Surely we need not wait for the advent of the next transit in 1882 to remind the present generation what they owe to the St. Helena observer of 1677. Have we not therefore established the fact that it is desirable to erect a memorial to Halley on the ancient site of his observatory in St. Helena?

Receiving in anticipation an affirmative reply from our readers in answer to the question above, we may now approach the next stage of our subject by inquiry as to the form which such a memorial should take; and the fact is that it matters very little in reality whether tablet or bust; whether column, pyramid, or statue be chosen, so long as it is not too ornate.[3] The simplest and most

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[1] See NATURE, vol. xix. p. 240. "Six Months in Ascension. An Unscientific Account of a Scientific Expedition." By Mrs. Gill. (Murray, 1878.)

[2] Darwin says: "After the volumes of eloquence which have poured forth on this subject, it is dangerous even to mention the tomb. A modern traveller, in twelve lines, burdens the poor little island with the following titles: it is a grave, tomb, pyramid, cemetery, sepulchre, catacomb, sarcophagus, minaret, and mausoleum!" ("A Naturalist's Voyage," p. 486.) Darwin's lodgings at Hutt's Gate were within a stone's throw of Halley's observatory, of which fact he appears to have been unaware; and, similarly, neither Napoleon nor any of his staff appear to have remarked the scientific associations of Halley's Mount during the six years they were resident at Longwood; a circumstance the more curious, as Napoleon always patronised science, perhaps less for its own sake than from motives of policy.

[3] In 1667 Halley found the variation of the compass to be 40′ E., it is now 24° W.

[1] See *Monthly Notices*, Royal Astronomical Society, December, 1875, p 51 Large materials for a life of Dr. Halley were found among the papers of the late Prof. Rigaud, which will be edited by Prof. Charles Pritchard, M.A

[2] "Tuscan Memorial to Galileo," by G. F. Rodwell (NATURE, vol. viii. p. 328, August, 1873)

[3] The sketch of one design has been shown us, consisting of a pyramid whose four sides are inclined at an angle of 70° with the base standing on a podium, which is dodecagonal surrounded with seats. The faces of the pyramid face the cardinal points. On the north face is Ursa Major, and on

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severe design alone will suit the locality, which we will presently describe, and may safely be left to the discretion of a committee of taste by a general meeting of the subscribers to the memorial as only a small sum of money need be expended on this object; but we would ask if this alone will appease the manes of Edmund Halley? We must give further explanations.

Within sight of Halley's Mount are *two* disestablished observatories. One, the most important, is that on Ladder Hill, with this inscription over the doorway: "HÆC SPECULA ASTRONOMICA Condita fuit A.D. MDCCCVII." This was Johnson's observatory, broken up when the Imperial Government took the island from the East India Company in 1834. It is now used as a mess-room for the officers, R.A. and R.E., at Ladder Hill.[1] The other is at Longwood, and was established in 1840 by Sabine as a magnetic and meteorological observatory; this station was broken up in 1845. In front of it on Deadwood Plain is the base-line measured by Lefroy, 2,986·3 yards in length.

The re-establishment of these valuable observing stations would indeed be a lasting memorial such as Halley would approve. Of the fitness of the first-named station as an astronomical observatory, we need only judge from the actual work accomplished there by Johnson and by Gill's appreciation of its position and capabilities. Of the second it will be manifest to all meteorologists, what an advantage such an establishment in the heart of the south-east trades would be to science; whilst Halley's magnetical researches could be renewed in an island where the atmospherical electricity is so seldom disturbed that lightning conductors are never fitted to the powder magazines, and where distant thunder is heard seldom more than once in a generation.[2]

A few more words may not be out of place to describe Halley's Mount. Nearly in the centre of the island it commands from its elevation of 2,400 feet, the whole of the northern portion of St. Helena. Four miles looking due north is the northern extremity of the island called Sugar-loaf, and four miles to the right is Dry-gut Bay and Stone-top, whilst the same distance to the left or west, is Bennett's Point. Throughout the whole of this northern semicircle, the view is bounded only by the sea horizon. Behind us the crateral ridge just under 3,000 feet hides the southern coast, which is distant only three miles in Sandy Bay. But although this ridge hides the view, it forms a fine background and shelter against the southern winds. Above Halley's Mount the mountain-tops are covered with indigenous vegetation, shrubby Campanulaceæ, Scævoleæ, mosses, lycopods, and arborescent Dicksonias, and the peculiar composite trees with cauliflower-like blossoms, much the same as when Halley was here two centuries ago; but beneath us, how changed. As Sir Joseph Hooker observed in a lecture on "Insular Floras,'' at the Nottingham meeting of the British Association in 1866, in reference to St. Helena:—"When discovered about 360 years ago, it was entirely covered with forests, the trees drooping over the tremendous precipices that overhang the sea. Now all is changed, fully five-sixths of the island are utterly barren, and by far the greater part of the vegetation which exists, whether herbs, shrubs, or trees, consists of introduced European, American, African, and Australian plants.'' On Halley's Mount the indigenous and exotic plants meet on equal terms, a fit vegetation to surround a cosmopolitan relic.

In the present day the most conspicuous features in the landscape of St. Helena, as viewed from the highlands, are the sombre plantations of pinaster (only introduced in 1787), which contrast strongly with the willow-leaved acacias of New South Wales; whilst on all sides are ever wider extending acres of *Phormium tenax*, grown for the sake of its economical fibre, and whose seeds afford capital fare to the numerous Chinese pheasants which inhabit the covers on the sides of Halley's Mount.

THE U.S. WEATHER MAPS

WE are again enabled, through the courtesy of Gen. Myer, of Washington, to present our readers with two Weather Maps of the War Department of the United States, which graphically present the mean pressure and temperature for the whole of the Northern Hemisphere of the earth for April, 1878, and the tracks of the centres of storms for the same month. As these maps are constructed from the observations of all the stations reporting to the Army Signal Service, they must be held as very accurately representing the meteorology of the period, and they may serve to show the extraordinary energy with which this well-directed meteorological system is conducted and turned to account in the interests of the public and of science.

The outstanding characteristic of the weather of 1878 was its extraordinarily high temperature to the east of the Rocky Mountains, chiefly in the upper valleys of the Missouri and Mississippi, and the Lakes region, rising in the latter to nearly 11°·0 above the mean of the month. April is one of the months in which the western prairies receive their annual maximum of rain, but during April, 1878, this maximum rose greatly above its normal amount, the rainfall of the basins of the Mississippi and its affluents, with the exception of Ohio, being generously large. In Minnesota the fall was nearly four inches in excess of the average. The region of absolutely heaviest rainfall covered a broad track extending from St. Louis, Mo., to Florida.

These characteristics of the distribution of the temperature and rainfall were impressively felt in the singular distribution of atmospheric pressure, which everywhere was under the average of April, but most pronouncedly so to the west and north-west of the regions of the extreme excess of temperature and rainfall. The deficiency at Omaha amounted to fully two-tenths of an inch, an unusual deficiency for that region and season.

Turning now to the map of the tracks of the centres of the storms of April, 1878, we observe that most of them group together and lingered longest in this very region of low pressure, and that immediately to the *east and south-east* lay those regions where temperatures ranged so unusually high, rain fell so copiously, and thunderstorms played so strikingly brilliant a *rôle* among the weather phenomena of the month.

These tracks of the different storm centres admirably illustrate some of the more prominent types of the States' storms. Storm No. I. is seen to branch into two shortly after it began its advance on the States, the one passing northwards and dying out after one day's course, near the Cumberland River, whilst the other pursued a north-easterly course toward Newfoundland. No. II. originated to the east of Pike's Peak, and after a two days' course to north-north-east, was lost sight of in Canada for want of the observations necessary to trace its course over that part of the Dominion. Whilst this storm had its centre over Minnesota, a deep barometric trough ran southward into the Gulf of Mexico—a feature of American storms of no unfrequent occurrence—and the rain area extended eastward over the lakes, the middle, and South Atlantic States, with frequent heavy thunderstorms, accompanied with hail. Storms IV. and V. illustrate the coalescence

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the south Crux. On the east the inferior planets, and on the west the comet. On the twelve seats are the signs of the Zodiac (has any one remarked that the conventional signs of the Zodiac have become a recognised ornamental pattern on the jewellery made by the natives on the west coast of Africa?) and the names of astronomical workers in the southern hemisphere.

[1] See "Six Months at Ascension," p. 26. David Gill's feelings at viewing this degraded observatory, remind us of Halley's disappointment on reaching Greenwich, on his appointment as King's Astronomer, 1720, and finding that the executors of Flamsteed had removed all the instruments See Whewell's "Inductive Science," vol. ii. Compare also the desolation of Uraniburg.

[2] We have not been able to ascertain in which observatory Capt. Foster's pendulum experiments were carried on between 1828-1831, but we presume in Johnson's observatory; nor are we sure where Maskelyne's station was.

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